PRIVATIZATION PILOT PROJECT FOR EXPEDITED SITE CHARACTERIZATION

TECHNOLOGY NEED

Several trends in the last few years have altered the remediation landscape:

- Expiration of the Superfund legislation in 1995 and an increase in voluntary cleanup agreements by the states.
- Rising requirements by the Securities and Exchange Commission (SEC) in 1994 for financial disclosure on environmental liabilities.
- The advent in 1995 of "Brownfields" approaches to restoration and site conversion.
- More complex negotiations on insurance reimbursement for cleanup cost recovery.
- State requirements for increased liability disclosures on property and casualty insurance firms.
- Development and actual deployment of better, cost-effective technologies for *in situ* treatment.

As a result of these trends, the Southern States Energy Board (SSEB) Industry Affiliates Group (IAG) was formed to enhance the exchange of perspectives and build consensus among key players and regulators on environmental issues. Some of the innovative approaches to environmental liability restructuring included:

- Proactive regulatory negotiations to incorporate reuse plans and resolve cleanup objectives.
- Work for improved financial approaches such as remediation cost cap insurance, trade credits, and other tools.
- Apply the new technologies to site characterization to improve site data and reduce costs.
- Foster preventive practices by government agencies, government contractors, and private industry to reduce pollution.

TECHNOLOGY DESCRIPTION

This is not a technology development project, but a project focusing on developing specific mechanisms to gain wide-scale use of Expedited Site Characterization (ESC). These mechanisms include:

- Establishing working agreements with the SSEB IAG, a coalition of major manufacturers and potential users in the southeast region of the United States.
- Conducting forums and training for multi-state regulatory acceptance.
- Using the SSEB team's expertise in forming investment partnerships (such as with the insurance industry) to finance the use of ESC in private-sector activities, for example, site/land conversions.

The ESC Pilot Project will focus on developing specific mechanisms:

- Working Agreements with User Consortia
  --User consortia garner "critical mass" for market acceptance.
  --DOE sites gain as other users adopt ESC.
  --Presentations made to SSEB Industry Affiliates and Utilities.

- Ongoing Forums/Training for Multi-State Regulatory Acceptance
  --Project builds on links with SSEB "Plus" program and Interstate Technical and Regulatory Cooperation.
  --Formalization of American Society for Testing Materials (ASTM) guidance document can be popularized.
  --Forums with regulators need to address implementation issues.

- Precedent Setting Agreements with Regulators
  --Cleanup governed by voluntary agreements is increasing.
  --ESC is an enabling platform to make agreements more effective.

- Investment Partnerships (e.g., Real Estate Investment Trusts)
  --Economic impact of ESC extends beyond cutting cleanup costs.
  --Investment capital is more geared to asset conversion than profit.
  --Additional follow-up with Insurance Industry: NAIC, AAA, and Insurers.

- Multi-State Regulatory Acceptance (Permit Leadership in U.S.)
  --Developing common data formats and protocols between states.
  --Streamlining permits using performance-based standards versus design-based.
  --Using performance data as benchmarks for technology performance.
  --Utilizing modular state adaptations to account for differences among states.
  --Broadening the application of ESC in the region.
  --Focusing on addressing regional environmental cleanup priorities.
  --Providing annual state environmental legislative summary to states.

BENEFITS

The benefits of ESC include:

- Privatization of ESC multiplies applications and regulatory acceptance.
- Use of ESC on industrial and DOD sites aids regulatory acceptance.
- Regulatory acceptance drives value for DOE site users (EM-40).
- ESC offers an enabling platform for engaging regulatory involvement.
- Enhanced regulatory cooperation accelerates technology deployment.

ESC carries economic impacts beyond site characterization costs by addressing uncertainties. As a general example, site characterization costs could be in the tens of millions; remediation costs could be in the hundreds of millions; site conversion values could be in the billions; and the financial impact of resolving liability uncertainties could be in the tens of billions. ESC reduces the total cost by the savings realized on the time-cost of money and by the early receipt of conversion revenues. Standard and Poors, a rating agency, estimates the nominal cost of Superfund, RCRA, and asbestos cleanups for private sector sites will exceed one-hundred-billion dollars over the next 30 years, including litigation costs and natural resource damage claims.

CAPABILITIESL/LIMITATIONS

This project fosters the voluntary participation and support of key players in government and industry. The success of the project depends on the degree of participation and active support it achieves with prospective users and their regulators in fostering ESC.

COLLABORATION/TECHNOLOGY TRANSFER

The SSEB Privatization Pilot Project for ESC has been collaborating with its Industry Affiliates Group, which is a coalition of major manufacturers and potential users in the southeast region. The SSEB organized its second annual Environmental Management Roundtable forum on January 22-23, 1998. It brought together more than 40 key decision-makers on environmental issues in a unique roundtable format that promoted open dialog on difficult regulatory and site conversion issues. The participants included state regulators representing five states (Florida, Louisiana, Nebraska, New York, and South Carolina), the U.S. Environmental Protection Agency (EPA), and the Interstate Technical Regulatory Cooperation (ITRC). State administrative and elected officials, engineering firms, manufacturers, utilities, and DOE representatives also participated. The Roundtable highlighted positive developments related to

the wider practice of ESC as interstate regulatory mechanisms have matured and as financial market developments have provided stronger incentives for site conversion.

ACCOMPLISHMENTS

- State regulators are continuing to negotiate with responsible parties; these negotiations have led to large increases in voluntary cleanup agreements. For instance, Texas has seen a doubling in their voluntary agreement program since 1995-1996 to more than 500 sites in 1997.
- Interstate regulatory efforts, such as the SSEB Plus Program and ITRC, have developed 21 protocols and work products that regulators can use for a variety of site applications (e.g., permeable barrier walls, bioremediation, thermal desorption, soil washing, and ESC). This year the ITRC has embarked on a training program for state regulators, and the SSEB is coordinating several forums on natural attenuation and *in situ* investigation techniques. More than 1,500 participants have attended the six forums to date.
- Disclosure requirements for companies with environmental liabilities have increased and that could lead to companies conducting more specific assessments of their liabilities.
  - --The Securities and Exchange Commission (SEC) required more complete disclosure by large, publicly traded companies in 1994.
  - --States mandated disclosure by Property and Casualty companies each year via Footnotes.
  - --The American Institute of Certified Public Accountants promulgated Standard Operating Procedure 96-1 as guidance for disclosure for 1997 financial statements.
- Some engineering firms have developed finance mechanisms, such as equity participation, in site conversion projects to participate in higher returns by managing remediation effectively.
- ESC as site conversion is being more widely practiced—particularly with the advent of field analytics and site modeling--though states have just started to embrace it formally. ITRC continues to promote ESC through their Accelerated Site Characterization working group. The U.S. EPA has also promoted field analytics widely through its site characterization consortium.
- Financial and insurance firms have migrated back into the contaminated property market.
  - --"Global settlements" for portfolios of sites among problem-holders are gaining ground as a vehicle.
  - --Some insurance companies (for example, Zurich-American and American Insurance Group)are more aggressive in converting liabilities.
  - --More Remediation Cost Cap insurance coverage is being written now, and by a few of the largest insurers who have made an investment in understanding remediation liability.

The SSEB team developing privatization approaches for ESC is currently tracking the upcoming series of Natural Attenuation Workshops as forums for promoting ESC more widely. The four forums scheduled over the next eight months will provide opportunities to reach more than 500 state regulators and 1,000 practitioners.

TECHNICAL TASK PLAN (TTP) INFORMATION

TTP No./Title: FT07C221 - Southern States Energy Board--Privatization Pilot Project, Expedited Site Characterization

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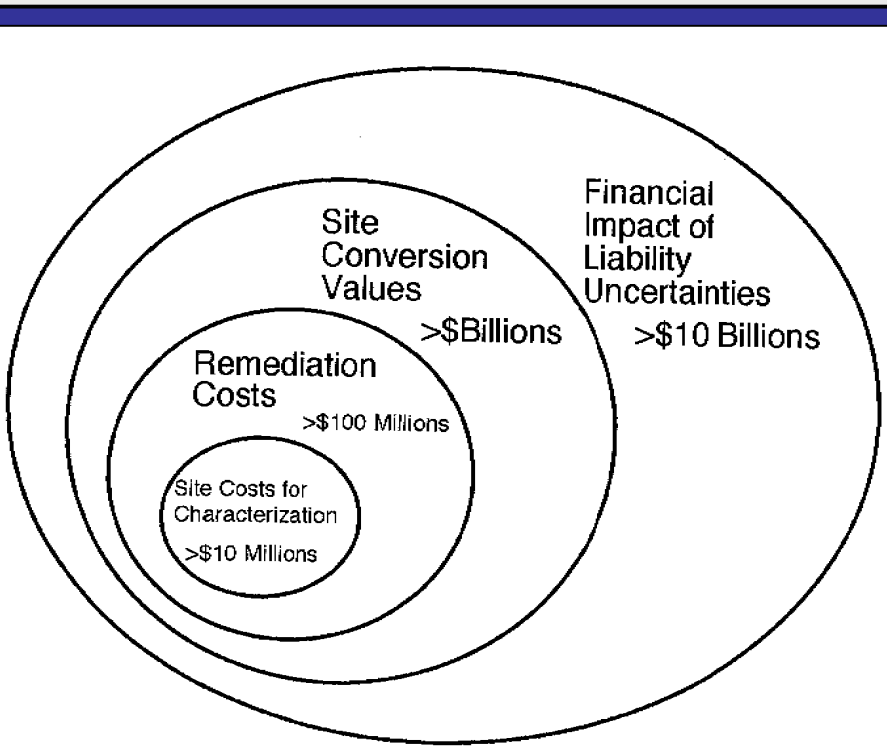

Early Site Characterization (ESC) can result in favorable economic consequences beyond site characterization costs by addressing uncertainties about the future now and by minimizing future costs. The Privatization Pilot Project fosters interaction and engagement between site users and other stakeholders and their regulators to achieve those benefits.